or his agent for each characteristic required to be tested shall be described in detail.

[37 FR 7562, Apr. 15, 1972, as amended at 43 FR 12316, Mar. 24, 1978; 60 FR 35694, July 11, 1995]

§28.32 Proposed quality control plans; approval by MSHA.

(a) Each proposed quality control plan submitted in accordance with this subpart shall be reviewed by MSHA to determine its effectiveness in insuring the quality of short-circuit protection provided by the fuse for which an approval is sought.

(b) If MSHA determines that the proposed quality control plan submitted by the applicant will not insure adequate quality control, MSHA shall require the applicant to modify the procedures and testing requirements of the plan prior to approval of the plan and issuance of any certificate of approval.

(c) Approved quality control plans shall constitute a part of and be incorporated into any certificate of approval issued by MSHA, and compliance with such plans by the applicant shall be a condition of approval.

§28.33 Quality control test methods, equipment, and records; review by MSHA; revocation of approval.

(a) MSHA reserves the right to have its representatives inspect the applicant's quality control test methods, equipment, and records, and to interview any employee or agent of the applicant in regard to quality control test methods, equipment, and records.

(b) MSHA reserves the right to revoke, for cause, any certificate of approval where it finds that the applicant's quality control test methods, equipment, or records do not ensure effective quality control over the fuse for which the approval was issued.

Subpart E—Construction, Performance, and Testing Requirements

§28.40 Construction and performance requirements; general.

(a) MSHA shall issue approvals for fuses for use with direct current in providing short-circuit protection for

trailing cables, when such fuses have met the minimum construction, performance, and testing requirements set forth in this subpart.

- (b) Fuses submitted to MSHA for approval will not be accepted unless they are designed on sound engineering and scientific principles, constructed of suitable materials, and evidence good workmanship.
- (c) Fuses may be single-element or dual-element in type, however, they shall be capable of interrupting any direct current within a range from the ampere rating of the fuse under consideration for approval up to 20,000 amperes.
- (d) MSHA shall accept the fuse size and ampere rating as specified in the Underwriters Laboratories, Inc., standard for alternating current fuses (UL-198), which is hereby incorporated by reference and made a part hereof. This document is available for examination at Approval and Certification Center, RR 1, Box 251, Industrial Park Road, Triadelphia, WV 26059, and copies of the document are available from Underwriters Laboratories, Inc., 161 Sixth Avenue, New York, NY 10013.
- (e) Fuses shall be capable of completely interrupting a current within 30 milliseconds after initial current interruption, and shall not show any evidence of restriking after 30 milliseconds.
- (f) The blown fuse shall show only superficial damage.

[37 FR 7562, Apr. 15, 1972, as amended at 43 FR 12316, Mar. 24, 1978; 60 FR 35694, July 11, 1995]

§28.41 Testing requirements; general.

- (a) The open circuit voltage of the test circuit shall be 300 volts d.c., or 600 volts d.c., depending on the voltage rating of the fuse being tested.
- (b) Time constant of the circuit (defined as T=L/R, where T is the time in seconds, L is the inductance in henries, and R is the resistance in ohms) shall be as follows:
- (1) For 10,000 amperes and greater currents, T=0.016 second or more;
- (2) For 1,000 amperes to 10,000 amperes, T=0.008 second or more;
- (3) For 100 amperes to 1,000 amperes, T=0.006 second or more; and